What is claimed is:

1. A method for detecting teneurin signalling, which method comprises:
   a) determining the presence of a cleaved teneurin product associated with teneurin signalling, wherein said cleaved teneurin product comprises at least a portion of the cytoplasmic domain of teneurin and targets to the cell nucleus; and
   b) correlating the presence and/or amount of said cleaved teneurin product with teneurin signalling.

2. A method as claimed in claim 1, wherein said teneurin is teneurin-1, teneurin-2, teneurin-3 or teneurin-4.

3. A method as claimed in any one of the preceding claims wherein the cleaved teneurin product is formed in tumour cells.

4. A method as claimed in claim 1 or 2, wherein the cleaved teneurin product is formed in neurons.

5. A method as claimed in any one of the preceding claims further comprising providing a teneurin or a fragment thereof comprising at least a portion of the N-terminal domain of teneurin and at least a portion of the C-terminal domain of teneurin, and a cellular component that cleaves teneurin.

6. A method as claimed in claim 5, wherein the teneurin is recombinant.

7. A method as claimed in any one of the preceding claims wherein the cleaved teneurin product comprises a tag or label.

8. A method as claimed in claim 7, wherein said determining step (b) comprises detecting said tag or label photometrically.

9. A method as claimed in claim 7 or 8, wherein said tag is selected from the group consisting of GFP, YFP, hemagluttanin, $(Histidine)_7$, a DNA binding domain.

10. A method as claimed in claim 9 wherein said determining step (b) comprises allowing said DNA binding domain to bind to a nucleic acid comprising regulatory

sequences operably linked to a reporter gene and detecting activity of said reporter gene.

11. A method as claimed in claim 10 wherein said DNA binding domain comprises a GAL4 DNA binding domain.

12. A method as claimed in claim 9, 10 or 11 wherein said tag is a DNA binding domain and further comprises an NFκB domain.

13. A method as claimed in any one of the preceding claims wherein said determining step comprises determining the amount of said cleaved tenascin product.

14. A method as claimed in any one of the preceding claims wherein the cleaved teneurin product regulates expression or activity of a cellular target.

15. A method as claimed in claim 14 further comprising detecting expression or activity of said cellular target.

16. A method as claimed in claim 15 wherein said cellular target is PML.

17. A method as claimed in claim 15 wherein said cellular target is Zic.

18. A method as claimed in claim 15 wherein said cellular target is ponsin.

19. A method as claimed in claim 1, wherein the presence and/or amount of the cleaved teneurin product is correlated to a particular disease or condition.

20. A method as claimed in claim 19, wherein said disease or condition is dependent on cell proliferation and/or neuronal differentiation.

21. Use of a detectable cleaved teneurin product associated with teneurin signalling in a method of diagnosis of a neuropathology or cell pathology affected by teneurin signalling.

22. A method for assessing the ability of an agent to modulate teneurin signalling, comprising the steps of:

(a) contacting teneurin with at least one agent;

(b) detecting cleavage of said teneurin by a cellular component associated with teneurin signalling in the presence of said agent; and

(c) correlating a difference in cleavage of said teneurin relative to when said agent is absent with an indication of the presence of an agent effective in modulating teneurin signalling.

23. A method as claimed in claim 22 wherein step (a) is performed by perfusing a cell expressing recombinant teneurin with the agent.

24. A method for assessing the ability of an agent to modulate teneurin-mediated signalling, comprising the steps of:

(a) exposing a cell to an agent;

(b) detecting expression or activity of a gene regulated by teneurin in said cell; and

(c) correlating a change in expression or activity of said gene with the presence of a modulator of teneurin signalling.

25. The use of an agent detected by a method of any one of claims 22 to 24 for the manufacture of a medicament for the treatment or prophylactic treatment of a neuropathological condition.

26. The use of an agent detected by a method of any one of claims 22 to 24 for the manufacture of a medicament for the treatment or prophylactic treatment of tumourigenesis or cancer.

27. The use of a cleaved teneurin product associated with teneurin signalling, wherein said cleaved teneurin product comprises at least a portion of the cytoplasmic domain of teneurin and targets to the cell nucleus; for the manufacture of a medicament for the treatment or prophylactic treatment of tumourigenesis or cancer.

28. The use of a cleaved teneurin product associated with teneurin signalling, wherein said cleaved teneurin product comprises at least a portion of the cytoplasmic domain of teneurin and targets to the cell nucleus; for the manufacture of a medicament for the treatment or prophylactic treatment of a neuropathological condition.

29. A method of treating an individual in need of treatment or prophylactic treatment of tumorogenesis, cancer or a neuropathological condition, said method comprising administering an effective amount of an agent identified by any one of claims 22 to 24 sufficient to ameliorate the symptoms of said indiviual.

30. A method of treating an individual in need of treatment or prophylactic treatment of tumorogenesis, cancer or a neuropathological condition, said method comprising administering an effective amount of a cleaved teneurin product comprising at least a portion of the cytoplasmic domain of teneurin, which targets to the cell nucleus, sufficient to ameliorate the symptoms of said indiviual.

31. A composition comprising a cleaved teneurin product and a cellular target of the cleaved teneurin product.

32. The composition of claim 31, wherein said cleaved teneurin product comprises at least a portion of the cytoplasmic domain of teneurin and targets to the cell nucleus.

33. A composition as claimed in claim 31 or 32 wherein said cellular target is PML.

34. A composition as claimed in claim 31 or 32 wherein said cellular target is Zic.

35. A composition as claimed in claim 31 or 32 wherein said cellular target is ponsin.

36. A composition as claimed in claim 31 or 32 wherein said cellular target is myc.

37. A composition as claimed in claim 31 or 32 wherein said cellular target is p53.

38. A kit comprising a teneurin and a protease.